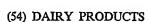
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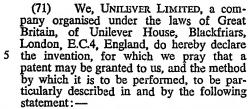
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- (72) Inventors ALBERT WIJNAND SCHOENMAKERS and JAN VELDSTRA





The invention relates to the preparation of packaged aerated viscous pasteurized dairy products, such as quark (fresh uncured cheese), cottage cheese and yoghurt or mixtures.

In the field of dairy-technology it has been accepted that, without the use of costly processes, it is practically impossible to obtain packaged aerated viscous dairy products with adequate shelf-life and, at the same time, with acceptable consistency and flavour. An example of a suitable but costly process is pasteurization or sterilization of the ingredients followed by aseptic whipping and packaging. Such a process is costly both in equipment and in the special precautions that have to be taken to ensure aseptic whipping and packaging.

It has now been found, surprisingly, that aerated viscous dairy products can successfully be pasteurized after packaging. The packaged products have adequate shelf-life and acceptable consistency and flavour. By consistency is meant both the appearance and the feel in the mouth. It has been found that adequate products are achieved when the non-fat dry matter content of the aerated viscous dairy product is between 1% and 4% less than the non-fat dry matter content of the corresponding aerated viscous dairy product that has not been pasteurized and that has the same consistency.

A whipping aid is used; particularly preferably a protein-based whipping aid is used, such as partly hydrolyzed proteins. Suitable and preferred products include D 100 sold under this trade-name of A. E. Staley Manufacturing Company and believed to be

enzymatically hydrolyzed soy protein as described in UK Patent Specification 1,231,652 and Hyfoama DS, Hyfoama 66 and Hyfoama 68 sold under these trade-names by Lenderink N.V. Hyfoama DS is an alkaline hydrolyzed casein as described in German Patent Specification 972,090. Hyfoama 66 and Hyfoama 68 are enzymatically hydrolysed wheat gluten, Hyfoama 68 also containing a stabilizer. Hyfoama is a registered Trade Mark. Such a whipping aid is used as a whipped aqueous solution containing sugar, which is mixed with the dairy product to aerate it. The process and each step in the process can be continuous or batch.

Stabilizers, such as locust bean gum, guar gum, gelatin, pectin and alginate, can advantageously be used. Preferred products are products containing cream and products containing fruit for example distributed throughout the product or as a layer at the bottom. When fruit is present mixed throughout the product, advantageously the stabilizer is derived from the fruit.

The product can be packaged in any convenient manner, for instance in closed plastic beakers or tubs. Pasteurization should occur above 50°C and preferably between 60°C and 70°C

The term "aerated" is, as is conventional, intended to cover the use of other suitable gases, such as nitrogen and carbon dioxide, as well as air. The percentage aeration, based on the volume of the unaerated product, will usually be less than 100% and preferably will be between 20% and 70%.

Percentages, other than of aeration, given in this specification are by weight.

EXAMPLE I
Production of low fat quark with fruit
1. Formulation

Curd, dry matter 15—15, 5% 100 kg Solution of guar gum 60 g/6.86 kg 10.5 kg Cream, 37% fat, liquid 3.7 kg Hyfoama/sugar solution, whipped 9.4 kg Fruit preparation 20 kg



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	2.	Formulation of Hyfoama/sugar solution Sugar 9 kg	The Hyfoama was first dry-mixed with the sugar and then dissolved in the water that	
		Water 9 kg	had been heated to at least 50°C. After	
_		Hyfoama 0.6 kg	thorough mixing the solution was cooled and	65
5	_	Gelatin 0.3 kg	then whipped.	
	3.	Formulation of Fruit Preparation	A locust bean gum solution was made	
		Sugar 49%	consisting of:	
		Fruit 50%	0.265 kg locust beam gum	
		Stabilizer and Flavour 1%	1.0 kg sugar	70
10	4.	Preparation of Hyjoama/sugar solution	10 l water	
		0.3 kg gelatin was dry-mixed with 1kg	The locust beam gum was dry-mixed with	
		sugar and sprinkled into 9 litres warm	the sugar and subsequently dissolved and	
		water (approx. 50°C) that was stirred	thoroughly mixed in the water that had been	
15		until the gelatin and sugar had dissolved.	heated to at least 70°C. The solution was	75
		0.6 Hyfoama was dry-mixed with 8 kg	allowed to cool to below 30°C.	
		sugar.	The curd and the locust bean gum solution	
		With slow stirring the mixture of Hy-	were mixed and then the cream and the	
		foama and sugar was added to the warm	colouring were added. When the mass had	
20		gelatin solution. Then, with introduction	been thoroughly mixed, the whipped Hy-	80
		of nitrogen, the cooled mixture was	foama solution was added with stirring.	
		whipped until an overrun of 300% was	The product was packaged with the fruit	
		obtained.	and pasteurized as described in Example I	
	5.	Preparation of the final product	under 5 (b).	
25	(a)	The curd was mixed with the guar gum	The overrun of the product was about	85
	•	solution and the cream. Then the whipped	18% and the dry matter content about 21%.	
		Hyfoama/sugar solution was added and	•	
		mixed in.	WHAT WE CLAIM IS:—	
	(b)	The mixture was then added to the fruit	1. A process for preparing a pasteurized	
30	` '	preparation already in plastic beakers.	packaged aerated viscous dairy product	90
		The beakers were sealed and placed in a	which comprises aerating a viscous dairy	
		hot-air chamber. The beakers were ar-	product by mixing said dairy product with a	
		ranged so that an even air-distribution	whipped aqueous solution of sugar contain-	
		was obtained. The temperature of the air	ing a whipping aid, the non-fat dry matter	
35		was not allowed to exceed 70°C. The	content of the mixture being between 1%	95
		residence time depended on the tem-	and 4% by weight less than the non-fat dry	
		perature. A residence time of at least 30	matter content of the corresponding aerated	
		minutes was used when the temperature	dairy product having the same consistency	
		in the centre of the product was 61°C.	but which has not been pasteurized after	
40		The final product had an overrun of 20—	aeration; packaging the aerated dairy pro-	100
		25% and a dry matter content of 19—	duct; and subsequently pasteurizing said	
		20%.	packaged aerated dairy product.	
		Example Π	2. A process as claimed in claim 1 in	
	Pi	roduction of fruit cottage cheese with 27%	which the dairy product contains cream.	
45		t on dry matter	3. A process as claimed in claim 1 or	105
	•		claim 2 in which the dairy product contains	
	1.	Formulation	a stabilizer.	
		Curd, dry matter 16% 100 kg	4. A process as claimed in any one pre-	
		Water 42 kg	ceding claim, in which the dairy product	
50		Cream, 37% fat 28.5 kg	contains fruit.	110
		Sugar 10.2 kg	5. A process as claimed in any one pre-	
		Locust bean gum 0.265 kg	ceding claim in which the dairy product is	
		Hyfoama 68 ex Lenderink & Co. 0.840 kg	quark, cottage cheese or yoghurt.	
		Colouring 0.020 kg	6. A process as claimed in claim 5 in	i
55		Fruit 36 kg	which the dairy product is quark.	115
		. Method	7. A process as claimed in any one pre-	
		A Hyfoama solution was made consist-	ceding claim in which the whipping aid is a	
•		ing of:	protein-based whipping aid.	-
		0.840 kg Hyfoama	8. A process as claimed in claim 7 in	1
60	1	9.2 kg sugar	which the protein-based whipping aid is a	
5 0		32.2 1 water	partly hydrolysed protein.	- 120
			party matorised protein.	

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9. A process for preparing a packaged aerated viscous pasteurized dairy product substantially as described with particular reference to either of the examples.

10. A pasteurized packaged aerated vis-

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